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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

LU, KUEN S

ART UNIT	PAPER NUMBER
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2167

DATE MAILED: 10/19/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/023,990	Applicant(s) SEIBEL ET AL.	
	Examiner Kuen S. Lu	Art Unit 2167	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 31 July 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 18-43 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 18-43 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 March 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendments

1. This Action is responsive to Applicant's Amendments, filed July 31, 2006.
2. Noted is the Amendments, filed July 31, 2006, made to the claims 18, 20-25, 27-28, 31-32, 35, 38-39 and 42 in order to overcome Examiner's rejection of the claims under 35 U.S.C. § 112, first paragraph. However, some minor informalities remained with claims 23, 25 and 42, please see ***Claim Objections*** in Office Action for non-Final Rejection (hereafter "the Action") shown next.
3. As to Applicant's Remarks, filed July 31, 2006, Applicant's arguments with respect to claims 18-43 have been considered carefully, please see the section ***Response to Arguments***, following the Action.
4. Please note in the Action, claims 18-19 and 35-43 are further rejected under 35 U.S.C. § 101. Claims 18-43 are pending in the application.

Claim Objections

5. Claims 23, 25 and 42 are objected to because of the following informalities:
In the claims, the phrase "digital picture (computer readable) visual representation" seems to be a typographical error of "~~digital picture~~ (computer readable) visual representation". Appropriate correction is required.

Claim Rejections - 35 USC § 101

6. 35 U.S.C. § 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Art Unit: 2167

6.1. As set forth in MPEP 2106 (II) (A):

The claimed invention as a whole must accomplish a practical application. That is, it must produce a "useful, concrete and tangible result." *State Street*, 149 F.3d at 1373, 47 USPQ2d at 1601-02. The purpose of this requirement is to limit patent protection to inventions that possess a certain level of "real world" value, as opposed to subject matter that represents nothing more than an idea or concept, or is simply a starting point for future investigation or research (*Brenner v. Manson*, 383 U.S. 519, 528-36, 148 USPQ 689, 693-96); *In re Ziegler*, 992, F.2d 1197, 1200-03, 26 USPQ2d 1600, 1603-06 (Fed. Cir. 1993)). Accordingly, a complete disclosure should contain some indication of the practical application for the claimed invention, i.e., why the applicant believes the claimed invention is useful.

Apart from the utility requirement of 35 U.S.C. 101, usefulness under the patent eligibility standard requires significant functionality to be present to satisfy the useful result aspect of the practical application requirement. See *Arrhythmia*, 958 F.2d at 1057, 22 USPQ2d at 1036. Merely claiming nonfunctional descriptive material stored in a computer-readable medium does not make the invention eligible for patenting. For example, a claim directed to a word processing file stored on a disk may satisfy the utility requirement of 35 U.S.C. 101 since the information stored may have some "real world" value. However, the mere fact that the claim may satisfy the utility requirement of 35 U.S.C. 101 does not mean that a useful result is achieved under the practical application requirement. The claimed invention as a whole must produce a "useful, concrete and tangible" result to have a practical application.

6.2. As set forth in MPEP 2106 (IV) (B) (1):

Claims to computer-related inventions that are clearly nonstatutory fall into the same general categories as nonstatutory claims in other arts, namely natural phenomena such as magnetism, and abstract ideas or laws of nature which constitute "descriptive material." Abstract ideas, *Warmerdam*, 33 F.3d at 1360, 31 USPQ2d at 1759, or the mere manipulation of abstract ideas, *Schrader*, 22 F.3d at 292-93, 30 USPQ2d at 1457-58, are not patentable. Descriptive material can be characterized as either "functional descriptive material" or "nonfunctional descriptive material." In this context, "functional descriptive material" consists of data structures and computer programs which impart functionality when employed as a computer component. (The definition of "data structure" is "a physical or logical relationship among data elements, designed to support specific data manipulation functions." *The New IEEE Standard Dictionary of Electrical and Electronics Terms* 308 (5th ed. 1993).) "Nonfunctional descriptive material" includes but is not limited to music, literary works and a compilation or mere arrangement of data. Both types of "descriptive material" are nonstatutory when claimed as descriptive material per se. *Warmerdam*, 33 F.3d at 1360, 31 USPQ2d at 1759. When functional descriptive material is recorded on some computer-readable medium it becomes structurally and functionally interrelated to the medium and will be statutory in most cases since use of technology permits the function of the descriptive material to be realized. Compare *In re Lowry*, 32 F.3d 1579, 1583-84, 32 USPQ2d 1031, 1035 (Fed. Cir. 1994) (claim to data structure stored on a computer readable medium that increases computer efficiency held statutory) and *Warmerdam*, 33 F.3d at 1360-61, 31 USPQ2d at 1759 (claim to computer having a specific data structure stored in memory held statutory product-by-process claim) with *Warmerdam*, 33 F.3d at 1361, 31 USPQ2d at 1760 (claim to a data structure per se held nonstatutory).

6.3. Claims 18-19 and 35-43 are rejected under 35 U.S.C. § 101 because the claimed invention is directed to non-statutory subject matter.

As per claim 18, the claimed invention represents a method of auditing an election comprising steps of marking paper ballots, scanning voted ballots, generating and analyzing visual representations, and associating the representations and vote data with voted ballot. It is noted that the method is auditing an election, however, the method lacks any actual act of auditing. Further, the associating step seems abstract and does not ensue any tangible result, for example, there is no determination of, if, any result ensued from the association step. However, a tangible, concrete and useful result is required in a practical application test. The consequence is non-statutory.

As per claim 35, the claims are directed to a computer-readable medium of instructions for control a system to perform some operations. However, the claimed "computer readable" medium comprises wireless telecommunication signals and carrier waves, forms of energy. As forms of energy, the signals and waves are not a matter, composition of matter or product; and do not fall within any one of categories of patentable subject matter. For later rejecting the claims under 35 USC §103, Examiner interprets "machine readable medium" as "computer readable storage medium".

As per claim(s) in the groups (19) and (36-43), the claims inherit the deficiency of being non-statutory directly or indirectly from claims 18 and 35, respectively, and do not rectify the deficiency individually or by inheritance. Again, the consequence is non-statutory.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

7.1. Claims 18-43 are rejected under 35 U.S.C. 103(a) as being unpatentable over McClure et al. (U.S. Patent 6,250,548, hereafter "McClure").

As per Claims 18, 24 and 35, McClure teaches "marking each of a plurality of" "paper ballots with a unique ballot identification" (See col. 30, lines 58-59 where a unique absentee ballot issue number is the 3rd data element in the ballot);

McClure does not explicitly teach that the paper ballot is marked after the ballot is voted, although the ballot identification marked in the ballot remains on the voted ballot.

However, McClure also teaches internet voting where image ballot is downloaded, displayed, written-in/changed, cast and stored at col. 37, lines 22-38 and further teaches retrieval of voted ballot by election official to evaluate legitimacy of voter handwriting at col. 32, lines 53-57.

It would have been obvious to one having ordinary skill in the art at the time of the Applicant's invention was made to combine McClure teachings of retrieving voted ballot with downloading, displaying and changing of ballot image for making changes to voted

ballot because McClure recognizes possibilities of errors in each step of voting process and implements error prevention or correction steps, such as authenticating voter identity and verifying voter eligibility, and the combined teaching would have enabled McClure's system not only to resolve the problem of prior art of voting system, but also rectify the errors made by voters such that the object of a voting system accurately converting voter's selection into a final tally could have been truly accomplished. (See last two paragraphs of BACKGROUND OF INVENTION and the beginning three and last one paragraphs of SUMMARY OF THE INVENTION of McClure reference).

McClure further teaches the following:

“scanning said plurality of voted ballots and generating computer readable visual representations of each of said ballots” (See col. 32, lines 29-41 where a scanning software scans and analyzes ballot, and generates an image based on analyzed ballot, and readability of the image is established on the fact that the scanning constructed image is storable in computer memory, and at col. 32, lines 53-57 and col. 37, lines 22-38 where voted ballot is retrieved for image evaluation and image ballot is downloaded for change and update);

“analyzing markings in said visual representations indicating a voter's intent made on said plurality of voted ballots” (See col. 32, lines 42-59 where cast ballot is scanned into image and voter's handwriting is converted and interpreted, and at col. 32, lines 53-57 and col. 37, lines 22-38 where voted ballot is retrieved for image evaluation and image ballot is downloaded for change and update);

“generating vote data associated with each of said plurality of voted ballots based on said visual representations of said ballots” (See col. 32, lines 49-57 where the voter’s interpreted write-in is stored as part of the voted ballot image, and at col. 32, lines 53-57 and col. 37, lines 22-38 where voted ballot is retrieved for image evaluation and image ballot is downloaded for change and update); and

“associating each said visual representation and corresponding vote data with said voted ballot based on said unique ballot identification” (See col. 32, lines 49-57 where the voter’s interpreted write-in is stored as part of the voted ballot image and at col. 33, lines 42-48 where voter information with voted ballot image is stored in memory location, and at col. 32, lines 53-57 and col. 37, lines 22-38 where voted ballot is retrieved for image evaluation and image ballot is downloaded for change and update).

As per Claims 19, 26 and 37, McClure further teaches **“vote data comprises said unique ballot identification”** (See col. 43, lines 24-31 by showing cast ballot and voter identification are linked together before ballot is selected and cast selection).

As per Claims 20, 27 and 38, McClure further teaches **“storing said computer readable visual representation and said vote data in a database”** (See col. 9, lines 42-44 where database maintains voted image and at col. 43, lines 32-35 and col. 44, lines 1-5 where the readable cast ballot is moved into the primary storage location at the voting site and later transmitted to a central computer to store selection).

As per Claims 21, 30 and 41, McClure further teaches **"storing said computer readable visual representation and said vote data in a relational database"** (See col. 9, lines 5-6 and 42-44 where database maintains voted image and commercial database for storing cast ballot includes relation databases).

As per Claim 25 and 36, McClure teaches **"a display device adapted to display at least one said visual representation and said vote data associated therewith"** (See Fig. 26 and col. 37, lines 17-22 and col. 30, lines 46-59 where ballot style with identification information, the issue number, is displayed).

As per Claim 22, 31, 32, 33 and 42, McClure further teaches the following:
"retrieving at least one of said computer readable visual representations" (See Fig. 26 and col. 37, lines 17-22 and col. 30, lines 46-59 where in the internet voting, the ballot style with identification information, the issue number, is retrieved and displayed);
"displaying said computer readable visual representation and said vote data associated therewith on a display device" (See Fig. 26 and col. 37, lines 17-22 and col. 30, lines 46-59 where in the internet voting, the ballot style with identification information, the issue number, is retrieved and displayed); and
"modifying said vote data associated therewith" (See Fig. 26 and col. 37, lines 22-38 and col. 30, lines 46-59 where in the internet voting, the voter writes in and/or change selection, and cast the ballot).

As per Claim 23, McClure further teaches the following:

“retrieving at least one of said computer readable visual representations” (See col. 42, lines 65-67 where voting tablet displays governor selection is the starting of the ballot selection/cast);

“displaying said computer readable visual representation and said vote data associated therewith on a display device” (See col. 42, lines 60-67 by showing the voting steps in the voting booth and voting tablet illuminating and displaying message for starting the voting/casting process);

“retrieving the voted ballot associated with said computer readable visual representation based on said unique ballot identification” (See col. 43, lines 24-31 by showing cast ballot and voter identification are linked together before ballot is selected and cast, and at col. 32, lines 53-57 and col. 37, lines 22-38 where voted ballot is retrieved for image evaluation and image ballot is downloaded for change and update); and

“modifying said vote data associated with said voted ballot and said computer readable visual representation” (See col. 43, lines 25-30 where voter can move his/her selections before finally casting by pressing the ballot cast button, and at col. 32, lines 53-57 and col. 37, lines 22-38 where voted ballot is retrieved for image evaluation and image ballot is downloaded for change and update).

As per Claims 26 and 37, McClure teaches “**mark said voted ballot with a unique ballot identification**” (See col. 43, lines 24-31 by showing cast ballot and voter identification are linked together before ballot is selected and cast, and at col. 32, lines 53-57 and col. 37, lines 22-38 where voted ballot is retrieved for image evaluation and image ballot is downloaded for change and update, and at col. 32, lines 53-57 and col. 37, lines 22-38 where voted ballot is retrieved for image evaluation and image ballot is downloaded for change and update).

As per Claims 27 and 38, McClure teaches “**associate said unique ballot identification with said vote data and said visual representation of said voted ballot**” (See col. 42, line 65 – col. 43, line 16 where voting styles according to each voter is displayed for his/her selection, and at col. 32, lines 53-57 and col. 37, lines 22-38 where voted ballot is retrieved for image evaluation and image ballot is downloaded for change and update).

As per Claims 28 and 39, McClure teaches “**a storage device for storing said vote data and said visual representation of said ballot**” (See col. 43, lines 32-35 and col. 44, lines 1-5 where the readable cast ballot is moved into the primary storage location at the voting site and later transmitted to a central computer to store, and at col. 9, lines 5-6 where commercial database for storing cast ballot includes relation databases).

As per Claims 29 and 40, McClure teaches "**said storage device comprises a database**" at col. 43, lines 32-35 and col. 44, lines 1-5 where the readable cast ballot is moved into the primary storage location at the voting site and later transmitted to a central computer to store, and " (See col. 9, lines 5-6 where commercial database for storing cast ballot includes relation databases).

As per Claims 34 and 43 McClure teaches "**modify said vote data based on a review of the voted ballot associated with said unique ballot identification in said vote data**" (See col. 43, lines 25-30 where voter can move his/her selections before finally casting by pressing the ballot cast button, and at col. 32, lines 53-57 and col. 37, lines 22-38 where voted ballot is retrieved for image evaluation and image ballot is downloaded for change and update).

Response to Arguments

8. Concerning Applicant's Remarks/Arguments, filed 7/31/2008, Please see discussion below:

1). At Page 8, concerning Applicant's amendment made to claims where "digital picture" was amended to "computer readable visual representation", Examiner agreed to drop 35 U.S.C. 112, first paragraph, rejection to the amended claims. However, claims 23, 25 and 42 remain objected to because the amendment was not thoroughly done.

2). At Pages 8-9, Applicant argued that McClure does not teach marking on a voted ballot. Examiner respectfully submits that McClure does not explicitly teach the

limitation as Applicant argued. However, McClure does teach changing downloaded ballot image and retrieving voted ballot for evaluating handwriting's legitimacy. Please refer to the Action concerning Examiner's combination of the above teachings for providing such teaching.

3). At Page 9, concerning claims 18, 24 and 35, Applicant argued that application teaches marking indicating voter's intent while McClure does not provide this feature. Examiner respectfully submits that McClure does teach equivalent by evaluating handwriting of voted ballot and changing downloaded ballot image, as previously described in the Action.

4). At page 9, concerning claims 18, 24 and 35, Applicant alleged the McClure does not teach unique ballot identification to associated paper ballot, image ballot and voted ballot. Examiner respectfully submits that McClure does provide issue number as an equivalent. Please see Fig. 26 where image or paper ballot has such number and cast ballot is scanned and constructed as voted ballot allowing election official to evaluate in col. 32.

5). At Page 10, concerning claims 18, 24 and 35, Applicant further alleged that McClure scans only voted data and nothing else. Examiner respectfully submits that McClure does scan the issue number and ballot as evidenced in the embodiment of Internet voting (col. 37 and Fig. 26).

6). Concerning other arguments made by Applicant, Examiner also respectfully submits that both the instant application and McClure teach electronic scanning,

computer reading of scanned data and verifying, changing and evaluating scanned image.

9. The prior art made of record

B. U.S. Patent 6,250,548

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

A. U.S. Publication 2004/0046021

C. U.S. Patent 4,776,510

D. U.S. Patent 5,218,528

E. U.S. Patent 5,878,399

Contact information

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kuen S Lu whose telephone number is (571) 272-4114. The examiner can normally be reached on Monday-Friday (8:00 am-5:00 pm). If attempts to reach the examiner by telephone are unsuccessful, the examiner's Supervisor, John Cottingham can be reached on (571) 272-7079. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for Page 13 published applications may be obtained from either Private PAIR or Public PAIR.


Art Unit: 2167

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Kuen S. Lu, 

Patent Examiner, Art Unit 2167

October 13, 2006


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